In the Claims:

Please cancel claims 2-15 and 37 without prejudice. Please amend claims 34-36 as follows:

1. (PREVIOUSLY CANCELLED)

2-15. (CURRENTLY CANCELLED)

16. (PREVIOUSLY CANCELLED)

17. (ORIGINAL) The UV absorbance detector calibration method of claim 38,

wherein the UV absorbance detector is a monochromator type UV absorbance detector having a mechanism that selectively isolates a wavelength bandpass from a range of wavelengths emitted by the spectral light source;

wherein the calibration method further comprises the step of actuating the wavelength selection mechanism in stepwise fashion to sequentially isolate each bandpass over the range of wavelengths; and

wherein the step of establishing includes establishing a relationship between the operation of the wavelength selection mechanism and each wavelength bandpass being sensed by the detector.

18. (ORIGINAL) The UV absorbance detector calibration method of claim 38,

wherein the UV absorbance detector is a spectrograph type UV absorbance detector where the sensor assembly is configured to simultaneously and separately detect radiation in a plurality of bandpasses;

wherein the step of sensing includes simultaneously and separately sensing in a plurality of bandpasses the radiation passing through the calibration medium, including radiation in the far UV region; and

wherein the step of establishing includes establishing a relationship between each of the plurality of bandpasses of the sensor assembly and each wavelength bandpass being sensed by the detector.

19. (ORIGINAL) The UV absorbance detector calibration method of claim 38,

wherein the rare-earth dopant in the calibration medium being provided exhibits spectral features in the range from about 220nm to about 700nm;

wherein said step of identifying includes identifying special features exhibited by the calibration medium and the light source; and

wherein said step of establishing includes establishing a relationship using the identified special features exhibited by the calibration medium and the light source.

20. (ORIGINAL) The UV absorbance detector calibration method of claim 39,

wherein the calibration medium being provided includes atoms of erbium and exhibits at least a spectral feature at about 257nm;

wherein said step of identifying includes identifying at least the spectral feature exhibited at about 257nm; and

wherein said step of establishing includes establishing a relationship for the far UV region using the identified spectral feature at about 257nm.

21- 33 (PREVIOUSLY CANCELLED)

34. (CURRENTLY AMENDED) The ~~calibration medium~~ optical instrument of claim 39, wherein the rare-earth dopant comprises atoms of erbium.

35. (CURRENTLY AMENDED) The ~~calibration medium~~ optical instrument of claim 39, wherein a concentration of the rare-earth dopant in the sol-gel glass monolith is selected so a good contrast between far UV spectral features of the dopant and background light is exhibited by the calibration medium.

36. (CURRENTLY AMENDED) The ~~calibration medium~~ optical instrument of claim 39, wherein the gel-sol glass monolith exhibits a transmittance of about 50% at about 250nm.

37. (CURRENTLY CANCELLED)

38. (ORIGINAL) A method for calibrating an optical instrument which optical instrument has a spectral light source, said light source capable of emitting light in the far UV range which light travels along a light path and which light comprises at least one wavelength, means for receiving a sample said within said light path, and a sensor assembly for receiving light and producing a signal, said sensor assembly producing a signal upon receiving light having said wavelength, the calibration method comprising the steps of:

disposing a calibration medium so as to be in said light path between the light source and the sensor assembly said light source emitting light in the UV spectral range, said calibration medium including a sol-gel glass monolith for receiving and transmitting light along a said light path, said sol-gel glass monolith having constituents comprising a rare-earth dopant therein; said constituents of the sol-gel glass monolith selected so the rare-earth doped sol-gel glass monolith exhibits a transmittance in the far UV range so at least one spectral feature of the rare-earth dopant in the far UV range is discernable and corresponds to a wavelength comprising a control value to allow the signal of said sensor assemble receiving light having said wavelength corresponding to said control value to be compared to a standard for determining the calibration of said optical instrument;

sensing the light passing through the calibration medium with said sensor assemble to produce signal; and,

comparing the signal to at least one other signal to determine the calibration of said optical instrument.

39. (ORIGINAL) An optical instrument comprising:

a spectral light source, said light source capable of emitting light in the far UV range which light travels along a light path and which light comprises at least one wavelength;

means for receiving a sample within said light path;

a sensor assembly for receiving light and producing a signal, said sensor assembly producing a signal upon receiving light having said wavelength;

a calibration medium capable of assuming a position in said light path between the light source and the sensor assembly, said calibration medium including a sol-gel glass monolith for receiving and transmitting light, said sol-gel glass monolith having constituents comprising a rare-earth dopant therein; said constituents of the sol-gel glass monolith selected so the rare-earth doped sol-gel glass monolith exhibits a transmittance in the far UV range so at least one spectral feature of the rare-earth dopant in the far UV range is discernable and corresponds to a control value to allow the signal of said sensor assembly receiving light having said wavelength corresponding to said control value to be compared to a standard for determining the calibration of said optical instrument.